Appl. No. 10,683,959
Amdt. dated September 24, 2007
Reply to Office action of June 27, 2007

PATENT

REMARKS

This Response is filed for the non-final Office Action of June 27, 2007. The response without any extension of time is due on **September 27, 2007**. The Applicant thanks the Examiner for carefully reviewing the application.

Rejections under 35 U.S.C. § 102(e):

Claims 1-34 were rejected under 35 U.S.C. § 102(e) as being anticipated by Sakurai et al. (U.S.Patent No 6,965,599) (hereinafter Sakurai). Applicant respectfully traverses this rejection.

Sakurai teaches packet relay apparatus that relays packets through a specific path based on classification using various modules. Class processing unit classifies send packets to be relayed and allocates different virtual IP addresses. A send packet relay unit translates source addresses of the send packets into virtual IP addresses on a class by class basis, to establish classified IP communication paths. (column 1, line 1 – col. 5, line 5, col. 11, line 40-col. 12, line 40). Thus, in Sakurai, the packet relay apparatus first classifies an application to which the packet belongs and provides a control of a specific *communication path* on a class-by-class basis based on the types of application communications. Sakurai uses protocol type and inside and outside port numbers and addresses from the received communication packet to determine a *communication path* over which the communication packet can be *relayed/transmitted*. An address translation rule table is used to send the packet to a gateway corresponding to the network address over the application dependent communication path. Accordingly, based on the teachings of Sakurai, the communication may be transmitted using one of two application dependent communication paths depending on the business application class. It is clear that Sakurai teaches selecting the *best path* for a communication packet to take rather than the *processing of the communication packet upon receipt or during*

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sending. (See Sakurai, column 3, line 1-column 4, line 2). According to Sakurai, using a specific application dependent communication path for each communication packet, it is possible to achieve a band assurance and a response assurance. (See column 5, lines 23-35).

Sakurai does not suggest or teach processing the incoming or outgoing communication packets. For instance, a communication packet may go through various levels/layers of processing that employ various communication modules (such as sockets file system module, a transport control protocol (TCP) module, an IP module, a firewall module, an IP security module, a Network Computing Architecture (NCA) module, a Carrier Grade Transport Protocol (CGTP) module, an IP multipath module, a clustering module, a Quality of Service (QOS) module, etc.) to examine data within the communication packet to determine if any processing needs to be performed by that layer before sending the data to the next layer. With Sakurai, once the dedicated data path is determined, the communication packet is processed conventionally, which means that the data from the communication packet goes through all the modules irrespective of the fact that a particular module is enabled for a specific data channel. This leads to wasted CPU resources and time. (See page 3, lines 1-5 of the claimed invention).

In contrast, the claimed invention describes the processing of an incoming or outgoing communication packet. Specifically, an event list is identified based on classification of the communication packet using connection information, such as input/output port numbers and addresses, in conjunction with administrative policies for the specific connection/classification. The event list identifies the essential communication modules in appropriate order that are to be used in processing the data in the communication packet. As can be seen, the claimed invention deals with *processing of the incoming/outgoing communication packets and not with the communication path* used in the transmission of the communication packets, as suggested/taught by Sakurai. By identifying specific modules to

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be used for processing the communication packet, CPU resources and time are optimally

used. (See page 25, lines 15-20).

In short, the claimed invention avoids overhead associated with each communication

module by eliminating redundant checks while determining whether a particular module is

needed to perform communications processing. Consequently, the claimed invention

chooses an event list based on the connection of an incoming or outgoing communication

packet by identifying local and remote IP addresses and port numbers for the connection, in

conjunction with administrative policies. The communication packet uses this event list for

processing receiving or sending packets. The event list identifies and provides pointers to

function calls to the appropriate communication modules for the connection thereby saving

CPU time and resource. (See Figures 3A, 3B, 4 and the corresponding description in the

specification).

The Applicant has amended the independent claims 1, 10, 16, 22 and 26 to further

distinguish the claimed invention from the reference of Sakurai. Specifically, upon

transmission of a communication packet, the communication modules within an event list are

configured to manipulate the corresponding communication module portion within the

respective event list so that subsequent communication packets can use the manipulated

communication modules in the respective event list for processing. As mentioned earlier,

Sakurai teaches updating the address translation table to include post-translation data, such as

post-translation port number and address. This is not the same as manipulating the event list

to change a function pointer so that subsequent communication packets may use the modified

event list for processing. Consequently, Sakurai does not suggest or teach the feature wherein

each module associated with the event list has the ability to write and/or manipulate its own

portion of the event list. This is advantageous because each module can directly move to

perform the appropriate function on the communication packet without having to go through

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the discover process, thus saving considerable CPU time and resource during processing of the communication packet. (See page 24, line 16-page 25, line 4).

The Applicant submits that Sakurai does not suggest or teach each and every element of the claimed invention and that the claimed invention is patentable over Sakurai. After entry of the present Amendment, the Applicant submits that the application is now in a condition for allowance, and a Notice of Allowance is, therefore, respectfully requested.

If the Examiner has any questions concerning the present Amendment, the Examiner is kindly requested to contact the undersigned at (408) 774-6905. If any other fees are due in connection with filing this Amendment, the Commissioner is also authorized to charge Deposit Account No. 50-0805. (Order No. SUNMP469). A duplicate copy of the transmittal is enclosed for this purpose.

Respectfully submitted,
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